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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT FISCHER and THOMAS REISINGER

Appeal 2009-003216
Application 10/717,363[1]
Technology Center 2600

Decided: August 17, 2009

Before JOSEPH F. RUGGIERO, MAHSHID D. SAADAT, and MARC S. HOFF, *Administrative Patent Judges*.

HOFF, *Administrative Patent Judge*.

DECISION ON APPEAL

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[1] The real party in interest is Siemens Aktiengesellschaft.

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a Final Rejection of claims 1-14. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

Appellants' invention relates to a method and receiver for carrying out such a method for receiving signals that use amplitude, frequency, or phase modulation techniques transmitted within a vehicle for radio applications, such as keyless remote-control entry or tire-pressure monitoring systems. The method teaches that one receiver may receive a first signal and further signals while guaranteeing optimum reception of the first and further signals in a simple and cost-effective way with low quiescent current consumption. The receiver of the present invention has different transmission configurations saved in memory, whereby the receiver can be switched into a given receive mode by setting, calling, or loading a relevant configuration. After start-up with a first configuration, the receiver attempts to receive signals using this configuration and to search for a suitable wake-up criterion respectively. If the signal-reception and/or search remains unsuccessful, the receiver switches over into a different receive mode, for example by calling a different configuration from a memory unit, and tries again to receive signals having transmission parameters corresponding to the different configuration and to search for a suitable corresponding wake-up criterion respectively. When the first or second wake-up criteria are received, the receiver is switched into an active mode associated with the selected configuration (Spec 1:5-17, 2:19-3:12).

Claim 1 is exemplary:

1. A method for receiving first signals and further signals using a receiver, the first and further signals differing in at least one of the transmission parameters: data rate, modulation type, wake-up criterion, synchronization and threshold, comprising the steps of:

a) in a first step in a quiescent mode of the receiver, performing receiving and searching for a first wake-up criterion intermittently using a first preset adjustable configuration of transmission parameters tuned for receiving the first wake-up criterion with a first data rate and/or a first modulation type and/or a first threshold; and

b) when the first wake-up criterion is not received or found in said quiescent mode, switching the receiver to at least one further configuration different from said first preset adjustable configuration and tuned for receiving a second wake-up criterion and searching for the second wake-up criterion, and

c) if said first or second wake-up criterion has been received in step a) or b), switching the receiver into an active mode with a respectively selected configuration.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Uber	US 4,633,515	Dec. 30, 1986
O'Connor	US 2002/0177406 A1	Nov. 28, 2002

Claims 1-4, 6, 7, 9-11, 13, and 14[2] stand rejected under 35 U.S.C. § 102(e) as being anticipated by O'Connor.

Claims 5, 8, and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over O'Connor in view of Uber.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Appeal Brief (filed February 14, 2008), Reply Brief

[2] The Examiner added claim 14 to the rejection under 35 U.S.C. § 102(e) on page 8 of the Final Office Action; yet neglected to add claim 14 to the initial statement of the rejection on page 3 of the Final Office Action.

(filed June 26, 2008), and the Examiner's Answer (mailed April 28, 2008) for their respective details.

ISSUE

The Examiner finds that O'Connor discloses each and every element of the claimed invention (Ans. 3 and 4). Specifically, the Examiner finds that O'Connor teaches a method for receiving signals that includes receiving a first wake-up criterion having a corresponding first configuration and switching to a second configuration to receive a second wake-up criterion, when the first wake-up criterion is not received (Ans. 3, 4, and 11).

More particularly, the Examiner finds that O'Connor discloses intermittently switching to another configuration after a second triggering event is received (Ans. 4 and 11).

Appellants contend that the claim language requires that the receiver intermittently receives and searches for a first wake-up signal (App. Br. 5, Reply Br. 6). Appellants further contend that the receiver switches to a second configuration to wait for a second wake-up criterion, if the first wake-up criterion corresponding to a first configuration is not received (App. Br. 5-6).

The principal issue in the appeal before us is: Did Appellants show that the Examiner erred in finding that O'Connor teaches a method for receiving signals that includes receiving a first wake-up criterion having a corresponding first configuration and switching to a second configuration to receive a second wake-up criterion, when the first wake-up criterion is not received?

FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

The Invention

1. According to Appellants, the invention concerns a method and receiver for carrying out such a method for receiving signals that use amplitude, frequency, or phase modulation techniques transmitted within a vehicle for radio applications, such as keyless remote-control entry or tire-pressure monitoring systems (Spec 1:5-17). The method teaches that one receiver may receive a first signal and further signals while guaranteeing optimum reception of the first and further signals in a simple and cost-effective way with low quiescent current consumption (Spec. 2:13-15).

2. The receiver of the present invention has different transmission configurations saved in memory, whereby the receiver can be switched into a given receive mode by setting, calling, or loading a relevant configuration. After start-up with a first configuration, the receiver attempts to receive signals using this configuration and to search for a suitable wake-up criterion respectively. If the signal-reception and/or search remains unsuccessful, the receiver switches over into a different receive mode, for example by calling a different configuration from a memory unit, and tries again to receive signals having transmission parameters corresponding to the different configuration and to search for a suitable corresponding wake-up criterion respectively. When the first or second wake-up criterion are received, the receiver is switched into an active mode associated with the selected configuration (Spec 2:19-3:12).

O'Connor

3. O'Connor teaches a receiver assembly that includes an ASK mode and a FSK mode selectively engagable to receive radio frequency transmissions from the tire monitoring system and a remote keyless entry system that switches between modes in response to receipt of a wake-up pattern (Fig. 2, Abstract).

4. O'Connor teaches the receiver assembly defaults to the ASK mode, operating in a lower power, and therefore is the default mode that is on when the receiver assembly is activated (para. 0015).

5. O'Connor teaches the receiver assembly switches to the FSK mode in response to a triggering event that may be a wake-up signal, a motor vehicle speed, or motor vehicle acceleration (para. 0039).

Uber

6. Uber teaches an emergency broadcast alert detector having a radio receiver that scans among several predetermined frequencies which, in operation, as long as noise is present at the output of the radio receiver, the pulses from a local oscillator are gated to a counter to cause the oscillator to switch from one frequency to the next (Fig. 1, Abstract, col. 3:58-4:4).

PRINCIPLES OF LAW

Anticipation pursuant to 35 U.S.C § 102 is established when a single prior art reference discloses expressly or under the principles of inherency each and every limitation of the claimed invention. *Atlas Powder Co. v. IRECO Inc.*, 190 F.3d 1342, 1347 (Fed. Cir. 1999); *In re Paulsen*, 30 F.3d 1475, 1478-79 (Fed. Cir. 1994).

Analysis of whether a claim is patentable over the prior art under 35 U.S.C. § 102 begins with a determination of the scope of the claim. We determine the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The properly interpreted claim must then be compared with the prior art.

In an appeal from a rejection for anticipation, the Appellants must explain which limitations are not found in the reference. *See Gechter v. Davidson*, 116 F.3d 1454, 1460 (Fed. Cir. 1997) ("[W]e expect that the Board's anticipation analysis be conducted on a limitation by limitation basis, with specific fact findings for each *contested* limitation and satisfactory explanations for such findings.")(emphasis added). *See also In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006)

On the issue of obviousness, the Supreme Court has stated that "the obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007). Further, the Court stated "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 416. "One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of the invention a known problem for which there was an obvious solution encompassed by the patent's claims." *Id.* at 419-420.

The determination of obviousness must consider, *inter alia*, whether a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and whether there would have been a reasonable expectation of success in doing so. *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1125 (Fed. Cir. 2000). Where the teachings of two or more prior art references conflict, the Examiner must weigh the power of each reference to suggest solutions to one of ordinary skill in the art, considering the degree to which one reference might accurately discredit another. *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991). If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). Further, our reviewing court has held that "[a] reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994); *Para-Ordnance Mfg., Inc. v. SGS Importers Int'l., Inc.*, 73 F.3d 1085, 1090 (Fed. Cir. 1995).

ANALYSIS

Claims 1-4, 6-7, 9-11, 13 and 14

Independent claim 1 requires "switching the receiver to at least one further configuration different from said first preset adjustable configuration and tuned for receiving a second wake-up criterion."

Similarly, independent claims 6 and 10 require that the receiver "comprises a changeover switch in order to switch to at least one further [a] second [preset adjustable] configuration different from said first [preset adjustable] configuration when the first wake-up criterion is not found ... and to search for a second wake-up criterion."

The Examiner finds that O'Connor discloses each and every element of claims 1, 6, and 10 (Ans. 3, 4, 10, 11, and 16). Specifically, the Examiner finds that O'Connor discloses intermittently switching to another configuration after a second triggering event is received (Ans.4 and 11, FF 3 and 5). The Examiner finds that there are other triggering events that would cause the receiver to switch from the ASK mode to the FSK mode such as when a vehicle that includes the receiver accelerates to a faster speed or is parked (Ans. 11).

Appellants contend that the claim language requires that the receiver intermittently receives and searches for a first wake-up signal (App. Br. 5, Reply Br. 6). Appellants further contend that the receiver is intermittently switched to a second configuration to wait for a second wake-up criterion, if the first wake-up criterion corresponding to a first configuration is not received (App. Br. 5-6). Appellants refute the Examiner's interpretation that when the receiver of O'Connor switches from the ASK mode to the FSK mode that it is "intermittently activating the receiver" as the claim language requires (Reply Br. 5). Appellants contend that the receiver assembly in O'Connor is always on, which is not the same as the Appellants' invention (Reply Br. 5). Appellants disclose that "intermittently" means "coming and going at intervals" or "not continuous," but O'Connor teaches that the ASK mode is "continuously" on to receive the wake-up signal (Reply Br. 5).

Although O'Connor teaches a receiver assembly that switches from an ASK mode to a FSK mode, we agree with the Appellants' position that O'Connor does not disclose intermittently switching between a first and second configuration of transmission parameters and waiting for a second wake-up criterion, if the first wake-up criterion corresponding to the first configuration is not received. O'Connor teaches a receiver assembly that defaults to the ASK mode and switches to the FSK mode after an ASK wake-up pattern is received; otherwise, the receiver assembly remains in the ASK mode (FF 4). We do not find in O'Connor a teaching of the receiver assembly switching to a second configuration and then waiting to receive a second wake-up criterion, as required by all three independent claims (1, 6, and 10). O'Connor teaches that there are several different types of triggering events: a wake-up signal, motor vehicle speed, or acceleration (FF 5). O'Connor teaches that a wake-up signal may be a type of triggering event but it does not teach that a wake-up signal or wake-up criterion is equivalent to other triggering events such as motor vehicle speed or acceleration (FF 5). Independent claims 1, 6, and 10 require a first and second "wake-up criterion," *not* a first and second "triggering event." Thus, the Examiner's finding that a second triggering event, such as vehicle acceleration, reads upon "a second wake-up criterion" is in error.

Therefore, because the Appellants have established error in the Examiner's rejection, we reverse the Examiner's rejection of independent claims 1, 6, and 10 and that of dependent claims 2-4, 7, 9, 11, 13, and 14.

Claims 5, 8 and 12

As noted *supra*, we reversed the rejection of independent claims 1, 6, and 10 from which claims 5, 8, and 12 respectively depend. We have

reviewed Uber (the additional reference applied by the Examiner to reject these claims), and find that the cited reference does not teach the limitations deemed to be absent from O'Connor.

We therefore reverse the Examiner's rejections of claims 5, 8, and 12 under 35 U.S.C. § 103, for the same reasons expressed with respect to the § 102 rejection of respective parent claims 1, 6, and 10, *supra*.

CONCLUSIONS OF LAW

Appellants have shown that the Examiner erred in finding that O'Connor teaches a method for receiving signals that includes receiving a first wake-up criterion having a corresponding first configuration and intermittently switching to a second configuration to receive a second wake-up criterion, when the first wake-up criterion is not received.

ORDER

The Examiner's rejection of claims 1-14 is reversed.

REVERSED

ELD

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